United Nations Industrial Development Organization

Distr.
GENERAL

IDB.10/32
21 September 1992

ORIGINAL: ENGLISH

Industrial Development Board

Tenth session
Vienna, 2-6 November 1992
Item 6 of the provisional agenda

UNIDO ENVIRONMENT PROGRAMME

Response of UNIDO to Agenda 21

Report by the Director-General

Summary

Establishes a basis for the active involvement of UNIDO in the substantive and institutional follow-up to the implementation of Agenda 21: sets out the role of industrialization in achieving sustainable development; relates the capacities and experience of UNIDO to the various programme areas of Agenda 21, focusing on those areas to which UNIDO should respond; describes those instruments available to UNIDO which, when used in a mutually supportive fashion, will contribute to the implementation of the Agenda; and discusses the financial and institutional mechanisms for responding to Agenda 21, including cooperation within the United Nations system.

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Introduction

1. The objective of the United Nations Conference on Environment and Development (UNCED), held at Rio de Janeiro, Brazil, 3 to 14 June 1992, was to agree on a sustainable future course of development that would reconcile the growing development requirements of the world's population with the environmental resources on which they are based. After more than two years of extensive negotiations in preparation for the Conference, Governments adopted the following documents: the Rio Declaration on Environment and Development, the Declaration of Forest Principles and, most importantly, Agenda 21, as a basis for international action into the next century. Agenda 21 addresses wide-ranging issues with the focus on sustainable development. All four sections into which the 40 chapters are divided are of relevance to UNIDO: Section I, Social and economic dimensions; Section II, Conservation and management of resources for development; Section III, Strengthening the role of major groups; and Section IV, Means of implementation. In addition, as will be seen from the present document, the references to selected chapters of Agenda 21 illustrate the extent and importance of UNIDO activities in achieving sustainable development.

2. The issues agreed upon in Agenda 21 reflect actions required of Governments, governmental and non-governmental organizations (NGOs) and the private sector, as well as the United Nations system. Whereas implementing Agenda 21 will be mainly the responsibility of Governments, it was recognized that other groups such as NGOs and the private sector would have to participate fully in the efforts to attain sustainable development as opposed to the present patterns of production and consumption. It was also recognized that substantial additional resources would have to be made available to developing countries, while

V.92 56906 3665E

Distr.: 24 September 1992

grants or concessional financing should be provided according to sound and equitable criteria. Furthermore, Governments agreed that international cooperation would have to be strengthened in order to achieve the objectives of Agenda 21. These objectives are enumerated under the heading "International institutional arrangements" of chapter 38 of Agenda 21, which states that:

(a) "All agencies of the United Nations system have a key role to play in the implementation of Agenda 21 within their respective competence" (para. 38.4); 1/

(b) "All relevant agencies, organizations and programmes of the United Nations system should adopt concrete programmes for the implementation of Agenda 21 and also provide policy guidance for United Nations activities or advice to Governments, upon request, within their respective areas of competence" (para. 38.7(b));

(c) In the same chapter (para. 28) it is noted that "all United Nations specialized agencies ... may consider ways of strengthening and adjusting activities and programmes in line with Agenda 21, in particular, regarding projects for promoting sustainable development. Furthermore, they may consider establishing special arrangements with donors and institutions for project implementation that may require additional resources".

3. In the light of the aforementioned, the following documents are being submitted for consideration by the Industrial Development Board at its tenth session under provisional agenda item 6:

(a) The updated UNIDO environment programme (IDB.10/17) (the original programme was first approved by Board decision IDB.6/Dec.7) is based on the recommendations and guidelines of UNCED, the views expressed by the General Conference at its fourth session and the results of the UNIDO Conference on Ecologically Sustainable Industrial Development (ESID);

(b) The present document is a direct follow-up to UNCED. It should be read in conjunction with document IDB.10/17.

A third document, the medium-term plan of UNIDO, 1994-1999 (IDB.10/5 and Add.1), presented under provisional agenda item 4, establishes in its section on environment and energy the programmatic framework in the medium term for the implementation of the environment-related activities of UNIDO. Considering that the medium-term plan has been conceived as a rolling plan, subject to review from one biennium to the next, it will be updated continually in light of developments within the United Nations system, as well as on the basis of the experience acquired and requirements deriving from the implementation of Agenda 21 of UNCED.

4. The argument of the present paper is that the mandate entrusted to UNIDO to promote ecologically sustainable industrial development represents an essential component of the response by the United Nations system to the global challenge presented in Agenda 21. It is intended to initiate, through the present document, a process of discussion at the level of the policy-making organs and thus establish a basis for the position to be adopted by UNIDO in submissions to the proposed commission for sustainable development, which is foreseen to be established within the framework of the Economic and Social Council (para. 38.11).

I. SUSTAINABLE DEVELOPMENT IN INDUSTRY

A. The role of industry

5. At UNCED, conclusions reached have put the global community firmly on the road to sustainable development. Progress down that road will depend on adherence to the principles enunciated in the Rio Declaration on Environment and Development and on the achievement of the objectives of Agenda 21, which underscores the fact that sustainability entails addressing environmental issues as an integral part of the development process. Development in general, and industrial development in particular, cannot be sustained in the long term if the environmental perspective is ignored. Sustainable industrial development must become the primary, long-term goal of the global community.

6. Industrialization is the main instrument for generating income and employment and establishing the resource base for economic development. Industry also creates the physical resources - the industrial products, the industrial equipment - which are the sine qua non for the promotion of human settlements (via the building industry) or for the promotion of human health (via the production of medical consumables and medical equipment). National policy makers and the world community as a whole are increasingly endorsing the role of industry in primary areas such as strengthening the role of business and industry (chap. 30), and in related areas such as environmentally sound technology, cooperation and capacity-building (chap. 34), or national mechanisms for international cooperation for capacity-building in developing countries (chap. 37). Decision makers also recognize that industry has a fundamental role to play in any policy aimed at achieving sustainable development in areas as widely disparate as combating poverty (chap. 3), protecting and promoting human health (chap. 6), promoting sustainable human settlement development (chap. 7), promoting sustainable agricultural and rural development (chap. 14), and ensuring the environmentally sound management of biotechnology (chap. 16) and of solid wastes and sewage-related issues (chap. 21).

7. At the same time it cannot be gainsaid that if not properly guided through responsible action by all parties concerned, the industrialization process can lead to environmental degradation. However, these potential negative externalities can be avoided and controlled if suitable economic incentives are offered that encourage the adoption of sustainable production methods. Clearly, it makes economic sense for industry to adopt solutions that yield profit and engender environmental protection. Such solutions could apply to manufacturing, research and development, design and overall management strategies based on the principles of sustainability, while their industrial application can be affected by a host of internal and external factors. The response by

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1/ Paragraph references throughout the document relate to Agenda 21.

industry to sustainable development will depend on the extent to which environmental soundness and business profitability are seen to converge. The focus should therefore be on integrating sustainability considerations into industrial activities at both the macro and micro levels in order to avoid the potential negative externalities associated with industrialization and development.

B. The role of UNIDO

8. As a further step towards focusing its environmental activities and given the need to secure the views of Member States, UNIDO convened the Conference on Ecologically Sustainable Industrial Development (ESID), held at Copenhagen, Denmark, 14 to 18 October 1991. The deliberations of the Ministers at that Conference and subsequent discussions of UNIDO governing bodies provided guidance to the Organization on the actions to be taken with respect to discussions at UNCED and the follow-up.

9. At the Conference, the view was clearly expressed that "the continuing deterioration of the global environment was closely related to the unsustainable pattern of production and consumption, in particular in industrialized countries." It was also agreed that "in developing countries, environmental degradation was closely related to poverty and under-development, as well as to demographic patterns and pressures. The promotion of economic and social development was therefore seen to be essential to the protection of the environment." The Conference also noted "with concern the financial and technological constraints facing the developing countries in realizing the desired ecologically sustainable industrial development" (GC.4/25/Add.1, paras. 20-21).

10. Agreements on the industry-related issues at ESID were reaffirmed at UNCED. The conclusions and recommendations of UNCED have established that there is no contradiction between Development and Environment.

11. From the perspective of developing countries, the primacy of industrialization is beyond dispute, despite its potential environmental costs. More importantly, industrialization could become a cure for the developing countries' environmental problems, if an environmentally sound industrial development strategy is pursued.

12. In this regard, the importance of low-waste or clean technologies to the industrialization process cannot be over-emphasized. These cover high technologies, including biotechnology, as well as the improved management of conventional technologies. A number of case studies have been reviewed that substantiate the potential of new clean technologies not only to reduce industrial pollution drastically, but also to remain economically profitable in their own right. The substantial savings achieved in terms of materials and labour costs are often more than sufficient to offset initial higher investment costs. Low-waste or clean technologies also offer a way out of a potential conflict between industrial growth and environmental protection. Growth and environmental protection can go hand in hand with the help of clean technologies.

13. At the ESID Conference, the Member States entrusted UNIDO with the mandate to seek ways of incorporating the environmental dimension of industrial development more deeply into its advisory, research, operational and investment-related activities. Some major directions for UNIDO action emerged as conclusions and recommendations of that Conference and also serve to reinforce Agenda 21. These are:

(a) Assisting developing countries in building the technical and scientific capacity to develop, absorb and diffuse pollution prevention techniques and cleaner production processes essential to making the transition to ESID;

(b) Assisting in the implementation of international environmental conventions and protocols;

(c) Assisting developing countries in determining the environmental soundness of industrial technologies;

(d) Assisting developing countries in integrating environmental considerations into their industrial strategies and policies;

(e) Assisting developing countries in identifying appropriate, including new, financial resources, where possible on concessional terms, that would enable them to take the necessary steps to achieve ESID;

(f) Assisting other countries, upon request, in achieving ESID in accordance with the provisions of the UNIDO Constitution and relevant considerations of the General Conference and Industrial Development Board;

(g) Strengthening its existing database and its capacity to coordinate the dissemination of technical and policy information on ESID.

II. AGENDA 21 AND THE ACTIVITIES OF UNIDO

14. The scope of Agenda 21 calls for a careful re-examination of the roles and responsibilities of the agencies in the United Nations system. Steps are already being taken to establish principles for defining those roles. Pending the outcome of the system-wide deliberations, UNIDO considers that it can play a key role in the implementation of certain programme areas and chapters of Agenda 21. The relevant chapters elaborated below are divided into two categories. The first category shows those programme areas that are accorded high priority within UNIDO, based on the Organization's specific strengths as developed over the past 25 years. UNIDO regards these programme areas as the Organization's primary concerns, as they are based on a clear delineation of its role and on an efficient division of labour within the United Nations system. The second category includes those programme areas where UNIDO can play a key complementary role contributing to the implementation of system-wide efforts relating to Agenda 21 by making optimum use of the expertise and experience available throughout the specialized agencies. Future directions for UNIDO activities are further elaborated in the updated UNIDO environment programme (IDB.10/17), taking full account of Agenda 21.

A. Category 1

Integrating environment and development in decision-making (chap. 8)

15. The UNIDO strategic management approach is based on a process of consultations and cooperation between the Government and the private sector for the development of flexible and demand-driven technical and financial support programmes that enhance productivity and secure sustainable growth. Furthermore, the policy studies, System of Consultations and technology acquisition and negotiation programmes are all instruments geared to effecting a proper integration of environment into the decision- and policy-making process.

Protection of the atmosphere (chap. 9)

16. UNIDO addresses this issue in three ways: (a) by developing alternative clean fuel programmes (cleaner coal and oil, emission control); (b) by stimulating greater efficiency in combustion processes and energy conservation; (c) by supporting alternative clean energy sources (solar, hydropower, hydrogen). Both environmental and energy considerations are being increasingly integrated into UNIDO activities, stressing the development of sustainable energy systems.

Protection of water resources: the oceans (chap. 17); fresh water resources (chap. 18)

17. An integrated anproach to water management can ill afford to ignore industry, and the efficient use of water was thus emphasized at the ESID Conference. Over the years, UNIDO has been endeavouring to minimize the impact of industrial activities on the aquatic environment. Its objective is to improve industrial efficiency by reducing the quantity of water used, the waste water produced, and the extent of water-borne pollutants. Complementing such efforts, manuals, guidelines and technological information on the management of waste water will be prepared and disseminated.

Environmentally sound management of biotechnology (chap. 16)

18. UNIDO has recognized the enormous potential that biotechnology offers both industrial development and environmental protection and is currently enhancing the biotechnological capacity of some developing countries so as to enable them to take advantage of their potential. Appropriate mechanisms and centres, such as the International Centre for Genetic Engineering and Biotechnology (ICGEB), have been set up. Efforts have and will continue to concentrate on studies and capacity-building, enabling countries to identify and capitalize on opportunities in biotechnology, based on their own comparative advantages, as well as on direct technical assistance in applying biotechnology to industrial activities in health care, chemical production and environmental protection; and to promote biosafety through inter-agency collaboration aimed at developing a biosafety information network and advisory service.

Environmentally sound management of toxic chemicals, hazardous wastes and solid wastes (chaps. 19, 20, 21)

19. Solid and hazardous industrial waste can be reduced through improved process efficiency. This involves promoting cleaner technologies, minimizing waste at source, developing alternatives for erstwhile waste and promoting recycling. In UNIDO priority is given to safety in chemical production, especially with regard to hazardous operations and toxic chemicals. This approach covers operational, occupational and environmental safety in chemical production, and contributes to the sound management of toxic chemicals, thus complementing the work initiated by the World Health Organization (WHO) in collaboration with UNEP and the International Labour Organisation (ILO) of the International Programme on Chemical Safety (IPCS). UNIDO is currently negotiating to join IPCS.

Global action for women towards sustainable and equitable development (chap. 24)

20. The integration of women in industrial development is a cross-sectoral issue. The approaches employed by UNIDO include: promotion of gender-sensitive programme/project design; studies and research programmes to monitor the impact on women of new technologies and industrial restructuring; examination of issues related to health, safety and working conditions of women workers; development and dissemination of appropriate energy-saving and environmentally sound technologies for rural women; maintenance of quantitative and qualitative databases on women in industry; and provision of policy support to Governments and industry in creating a sustainable and enabling environment for the participation of women in industry; organization of training workshops to promote women entrepreneurs in selected industrial branches with specific emphasis on environmentally sound and energy-saving technologies.

Strengthening the role of business and industry (chap. 30)

21. UNIDO will analyse increasingly the role of business and industry with a view to advocating either the short- or long-term profitability of environmental protection through the use of clean or energy-efficient technology and energy conservation in industry. UNIDO will build on its prior experience of pollution prevention through product and process improvement, including plant modernization and rehabilitation. Business and industry in developing countries will be assisted in the adoption of processes and procedures that reduce demand on resources by industry and generate less industrial waste, inter alia, by devoting particular attention to environmental considerations in the operation and development of small- and medium-scale industries. Through demonstration activities such as cleaner production centres, UNIDO will foster the reduction of industrial waste in the production process. The investment promotion activities of UNIDO will play a major role in providing enterprises in developing countries with the means to approach sources of financing required for diversification of their products and services into environment-related areas.

Environmentally sound technology, cooperation and capacity-building (chap. 34)

22. Inherent in all efforts to promote sustainable industrial development is the need to select appropriate technologies based on social, technical, economic and environmental criteria and to develop the absorptive capacity for these

technologies. Support is also provided in the negotiation of technology transfer contracts in order to ensure that the transfer mechanism matches the needs and capabilities of the recipient. The efforts of UNIDO to assist developing countries in effective technology transfer will strengthen the ability of those countries to meet the obligations of international agreements relating to environmental protection, as outlined in the recommendations of ESID. For example, the transfer of appropriate technology reduces dependence upon technologies using chemicals damaging to the ozone layer; it is thus in accordance with the aims of the Montreal Protocol on Substances that Deplete the Ozone Layer. Similarly, appropriate technologies can minimize the quantities of hazardous wastes produced by industry, which supports the principles of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

Information for decision-making (chap. 40)

23. Adequate decision-making for industry is directly related to the adequacy of information available. UNIDO is working at three interrelated levels to provide information to developing countries: (a) collection and dissemination of industry-related environmental information to developing countries through a referral/clearing house system; (b) data and information collection, analysis and modelling as a basis for policy formulation and decision-making; (c) inclusion through the UNIDO feasibility study programme of environmental considerations in the calculation of the costs and benefits of potential investments. The Organization's activities also take on a further dimension in enhancing public awareness, with the public information programme advocating sustainable industrial development through the print and audio-visual media, among other approaches, and by promoting closer and continued linkages between UNIDO and developing-country counterparts, donors, the media and the public at large.

National mechanisms and international cooperation for capacity-building in developing countries (chap. 37)

24. Capacity-building permeates the many different layers of the Organization's response to Agenda 21. Its support to national capacity-building concentrates on three fundamental aspects of sustainable industrial development: (a) enhancing national capacities to incorporate environmental considerations into industrialization policy and strategies; (b) enhancing capacities to disseminate and analyse technological information; (c) improving capacities to analyse and exercise choices among technological options. Closely linked to technology cooperation, UNIDO's experience forms a substantial base upon which to continue, in cooperation with Governments, the United Nations system, NGOs and the private sector, to strengthen and amplify those activities.

B. Category 2

Combating deforestation (chap. 11)

25. On the basis of its experience and ongoing activities, UNIDO supports the concepts of Agenda 21 related to deforestation by promoting the value of forestry products, maximizing the return on forestry products and publicizing the use of secondary wood species, agricultural residues and non-wood products. The programmes include using agricultural residues such as cotton-stalk wastes for charcoal manufacture, non-wood fibres such as bagasse for paper manufacture, recycling waste paper and increasing the efficiency of pulp and paper mills.

Combating poverty (chap. 3); promoting sustainable agriculture and rural development (chap. 14)

26. The Organization's promotion of safer and more environment-friendly agro-chemicals such as pesticides and fertilizers and their formulations, should contribute to industry's role in the development of sustainable agriculture. It will also complement integrated pest management as well as add to the International Code of Conduct on the Distribution and Use of Pesticides. Furthermore, the assistance provided by UNIDO to such areas as low-cost housing, use of agricultural residues for energy, construction materials and pulp and paper will lend the necessary impetus to rural development.

III. UTILIZATION OF UNIDO PROGRAMME INSTRUMENTS TO IMPLEMENT AGENDA 21

27. Based on the three goals established at the ESID Conference - protection of the biosphere, most efficient use of man-made and natural capital and promotion of equity - the response will cover the following four dimensions of UNIDO activities:

(a) Assessing, monitoring and disseminating industry-related information (global, regional and national levels);

(b) Supporting policy formulation and negotiation (regional and country levels);

(c) Implementing operational activities in the field (sectoral, subsectoral and enterprise levels);

(d) Lending investment-related support to developing countries (enterprise level).

28. In order to achieve maximum impact, the UNIDO approach must take cognizance of those four dimensions and integrate them in the design of its activities. Thus, policies elaborated at the global, regional or national level can lead to the implementation of operational activities at the enterprise level, or conversely, activities at the enterprise level may yield results that are applicable at higher levels. All of these activities, in turn, can provide the basis for industrial investment promotion. The experience gained through its operational activities enhances the research and studies capabilities of UNIDO to provide relevant policy advice. The initial level, that is, the "entry point", at which an activity will be carried out, will depend on the specific situation of the country or region to be assisted, national policies adopted, the nature and scale of the problem to be solved and the target groups to be addressed.

29. UNIDO being an intergovernmental organization, its natural counterparts are the legislative, planning and regulatory bodies that deal with industrial and environmental issues.

The development of national capacities, however, is not confined to Government institutions. UNIDO has therefore forged close links with industrial sectoral or subsectoral institutions and research institutes, which are key elements in creating public awareness of environmental issues and contributing to the protection and management of the environment. Individual industrial enterprises (public and private sector) are the ultimate actors in implementing cleaner production technologies and pollution abatement measures. Interventions by UNIDO at the enterprise level will support an overall strategy and, as demonstration models, have a strong multiplier effect at the sectoral/subsectoral, national, regional and/or global levels.

30. As stressed throughout Agenda 21 and in the conclusions and recommendations of the ESID Conference, sustainable development can be achieved successfully with the full support of financial sources and the participation and involvement of target beneficiaries. The selection of the entry point mentioned above will therefore be effected through a participatory approach. UNIDO has different methodologies for that purpose. At the macro level, the strategic management approach can be used, as described in paragraph 15 above. In the development of technical cooperation programmes and projects, UNIDO can use the objective-oriented project planning methodology, which comprises a problem analysis in which all parties involved participate in identifying the problem, objective and alternative options. In its work on investment and rehabilitation at the programme and project level UNIDO has its well-tested methodologies for investment project appraisal and enterprise diagnostics which integrate the environmental dimension into the economic, financing, marketing and technical analyses. Through the use of these and other methodologies UNIDO ensures that the environmental aspects are given full consideration in all stages of the project cycle.

31. In support of the overall system-wide coordination, UNIDO will serve as a focal point for coordinating industry-related environmental activities at the country level. It will thus be in a position to provide advice to Governments on the horizontal integration of national, bilateral and multilateral activities in the field.

32. The individual programme instruments that UNIDO will use to carry out these activities are described below.

(a) Assessing, monitoring and disseminating industry-related information

33. UNIDO will apply two major programme instruments at this level: studies and research and information services. Their contribution to Agenda 21 is fundamental, as they provide the basis for interventions at the other three levels (as listed in (b), (c) and (d) of para. 27 above).

(i) Studies and research

34. The objectives of UNIDO studies and research include the monitoring and evaluating of current industrialization strategies, policies and trends at the global, regional and country, as well as sectoral levels; analysing major strategic issues related to industrial development; and acting as a focal point for the exchange of research on industrial and technology matters among members of the world industrial community. UNIDO makes the results of these studies available to Governments, the public and private sectors of industry, governmental and non-governmental organizations.

35. The UNIDO study programme pays special attention to supporting the required shift in industry-related environmental protection from damage control to preventive action. Emphasis is on designing appropriate industrial policies and incentive systems; defining the role of industrial research and development activities; and on harnessing market forces and the innovation potential of the private sector for improving the environment.

36. By including the consideration of environmental aspects in all its industry-related studies and concentrating on the environment in many of them, UNIDO will contribute to increasing environmental awareness in relation to industrial development. By so doing, it lays the foundation for the use of cleaner technologies and the reduction of pollution and waste, as well as showing ways in which industry can contribute to solving environmental problems in other sectors of the economy.

(ii) Information services

37. This instrument focuses on collecting, monitoring, analysing and disseminating industrial statistics as well as technological and other industry-related information through several UNIDO databases and information systems. The systems include an information programme specifically devoted to environment and energy, and operated jointly with the United Nations Environment Programme (UNEP). Through these systems, UNIDO will be able increasingly to grant users in developing and developed countries access to large bodies of knowledge, thus providing them with the basis for better-informed decisions that give adequate consideration to the impact on the environment.

(b) Support to policy formulation and negotiation

38. The studies and information activities described above constitute a basis for providing policy advice services primarily to Governments and other institutions involved in industrial policy-making. Demand for these kinds of activities is strong and growing as Governments increasingly require impartial advice on such critical issues as the incorporation of environment and natural resource aspects into their national industrial development plans and coordination of different environment-related industrial activities at the country level. In order to meet these requirements, UNIDO will offer assistance through its programme instruments as described below.

(i) Policy studies

39. UNIDO policy studies provide a coherent analysis of the critical environmental impact areas of a country's industrial sector or specific subsectors, such as the leather or chemical industries. These studies focus on many of the Agenda 21 programme areas, including: integrating

environmental and industrial decision-making; increasing energy efficiency in industrial production; conserving natural resources through more efficient production techniques; reconciling industrial development and human settlement issues; and promoting subregional, regional and global cooperation.

(ii) System of Consultations

40. Through its sectoral and participatory approach involving actors at the decision-making level, the UNIDO System of Consultations can effectively tackle issues of environment and safety at the subsectoral level. Environment-related recommendations adopted at the Consultations can provide useful inputs to the decision-making process at the governmental and industrial levels and also form the basis for follow-up by UNIDO in its operational activities.

(iii) Industrial technology promotion

41. Through this programme instrument, which encompasses a wide variety of promotional and information services, UNIDO provides policy makers and technology negotiators with working materials and guidelines that can improve their awareness of the importance of introducing environmentally sound technologies or of considering environmental aspects in negotiating contracts for infrastructure and industrial facilities.

(iv) The strategic management approach to industrialization

42. The formulation and implementation of effective development strategies and policies is a basic prerequisite for ESID. The UNIDO strategic management approach is based on a consultative process described in chapter II of the present document. This process facilitates a consensus on policies and measures that need to be taken in order to ensure that the ESID principles are adequately reflected in the industrial development process.

(c) Implementation of operational activities in the field

43. Recent international developments and their impact on the United Nations system as a whole, the need for specialized agencies to establish themselves as the internationally recognized "centres of excellence" in their respective fields of competence, all require a global response; this applies equally to the new challenges and opportunities deriving from closer economic interdependence and development issues of a global nature. UNIDO is increasingly emphasizing its ability to undertake "upstream" work based on the programme instruments outlined in paragraphs 33 to 42 above. Nevertheless, the major strength of UNIDO lies in its ability to apply this upstream work to the development and implementation of technical cooperation activities carried out at the request of developing countries. This ability will be instrumental in the role of UNIDO in implementing Agenda 21.

44. Sole reliance on market forces for the direct transfer of technology from developed countries is not always appropriate from the point of view of sustainability. Very often, production patterns that have been developed in industrial societies are of limited use to developing countries and can sometimes have a directly damaging effect. UNIDO operational activities, therefore, are aimed at promoting the transfer and adaptation of technologies appropriate to the situation and requirements of developing countries including the development of indigenous technologies, as well as of managerial, technical, administrative and research capabilities.

45. A major comparative advantage of UNIDO lies in its direct contacts with industry, allowing it to provide direct assistance at the factory level on the basis of the wide range of experience the Organization has gained in the assessment and identification of environment-related industrial problems.

46. UNIDO has developed and is implementing technological, engineering and training programmes directed towards solving these problems. Specific environment-related areas covered by these programmes include the management of toxic and hazardous wastes and the reduction of air and water pollution, where the choice of technology and equipment as well as its production and maintenance are of crucial importance.

47. The main types of environment-related operational activities are:

(i) Capacity-building activities, including those leading to the establishment of centres of excellence in technological areas, having direct relevance to environmental issues. The functions of these activities include: promoting awareness, providing scientists and engineers from developing countries with access to state-of-the-art scientific research, promoting cooperative research and implementing development and training programmes;

(ii) Pilot and demonstration plants aimed at the appropriate application and dissemination of new and advanced technologies in order to promote cleaner production techniques, and thus environmental sustainability;

(iii) Direct support to selected industries and institutions aimed at, for example, improvement of capacity utilization, modernization of existing plants, product diversification, introduction of newer, safer and cleaner technologies, quality control/assurance, waste minimization/management and streamlining management and operational activities.

(d) Investment-related activities

48. Attaining the objectives of Agenda 21 and, in particular, initiating and fostering the process of global sustainable industrial development can only be achieved on the basis of industrial investment in specific target areas. As one of the first international organizations involved in the mobilization of financial resources, both international and national, for the industrialization of developing countries, UNIDO has acquired a wide and possibly unique range of experience and knowledge of the investment process at the micro-level in the developing countries.

49. An important facet of the Organization's contribution to the attainment of the objectives of Agenda 21 in this area lies in its ability to

establish a two-way linkage between investment and technical cooperation. This means that investment-related activities could lead to technical cooperation and, conversely, technical cooperation could lead to investment promotion. This linkage is established within the context of country and subregional level policy analysis and normative policy. These activities will enable developing countries to gain access to and optimize utilization of environmentally sound technologies.

50. One of the strengths of the Organization in investment-related activities is reflected in its ability to implement a complete programme of pre-investment activities required for creating the basis for sustainable industrial development, covering all the key elements in the investment project cycle: from the appraisal of the economic, financial and technical and environmental viability of potential investment projects to the implementation of programmes for the mobilization of financial resources needed to promote those projects. The programme is supported by the UNIDO network of investment promotion offices and centres for industrial cooperation in the developed and developing countries.

IV. FINANCIAL AND INSTITUTIONAL MECHANISMS FOR RESPONDING TO AGENDA 21

51. As outlined in the preceding chapters, promotion of the industrialization of the developing countries, within the policy framework of sustainability, can be one of the most efficient ways of implementing Agenda 21. UNIDO has a primary role to play in assisting developing countries in promoting ecologically sustainable industrial development. The following lines of action would enable UNIDO to contribute to the implementation of Agenda 21 based on its comparative advantages, the specificity of its role within the United Nations system, its technical and substantive capacity and capabilities and the maximization of the use of existing and new funding sources and mechanisms. The latter aspect takes on particular importance in the light of the UNCED recommendation that progressive implementation of Agenda 21 should be matched by the provision of additional financial resources.

A. Use of existing financial mechanisms

52. As mentioned in Agenda 21 (chap. 33, para. 33.16), funding should be provided in a way that maximizes the availability of new and additional resources and which uses all available funding sources and mechanisms, including those of the relevant specialized agencies, which have designated roles to play in supporting Governments in implementing Agenda 21. Furthermore, it is stated in Agenda 21 that, within the context of its capacity-building activities at the country level, UNDP should make full use of the expertise of the specialized agencies. On the subject of investment, Agenda 21 states that "mobilization of higher levels of foreign direct investment and technology transfers should be encouraged through national policies that promote investment and through joint ventures and other modalities" (para. 33.17). The various mechanisms available to UNIDO for the mobilization of financial resources for industrial development offers a firm basis for assisting in the implementation of Agenda 21.

53. The Industrial Development Fund (IDF) is the main financing mechanism available to UNIDO for directing financial resources towards projects and programmes that relate to the Organization's priority themes. Contributions provided by special-purpose donors to the Fund for subprogrammes I and II of the updated UNIDO environment programme (see also IDB.10/17, para. 27) have already significantly strengthened the capacity to render industry-related assistance with regard to ESID and will continue to do so in the future. Analytical services in the form of sectoral and subsectoral studies will also be carried out within the framework of the technical support services at the programme level (TSS-1) activities of UNDP.

54. Preparatory activities in support of Agenda 21 in the form of sectoral, regional and country studies, as well as preparatory assistance projects, will be financed mainly from four sources: the general convertible component of IDF, as mandated in General Conference decision GC.4/Dec.21; the regular programme for technical cooperation; the UNDP Project Development Facility (PDF); and TSS-1 activities, based on a complementary use of funds, as requested in the Industrial Development Board decision IDB.9/Dec.7, paragraph (k)(iii).

55. Operational and investment promotion activities under subprogrammes III and IV of the UNIDO environment programme (IDB.10/17, para. 27), which address cleaner production and pollution abatement, respectively, are being promoted under the sources of funds available to the Organization (IDF, trust funds, regular programme for technical cooperation, Special Industrial Services, technical support services at the project level (TSS-2) and administrative and operational services (AOS)) based on the priorities and guidelines of the respective funds. The trust fund mechanism also enables the Organization to secure funds for environment-related projects in developing countries, offering flexible direct negotiations with industry and a rapid response by UNIDO at the plant level. In order to facilitate the planning, management and mobilization of resources, a programmatic approach will be followed whenever practical. This approach will offer a means of linking multilateral and bilateral resources in a coordinated programmatic thrust. It should be emphasized, however, that the success of the Secretariat's efforts to optimize the use of the available mechanisms and financial resources in addressing the programme areas of Agenda 21 will depend upon the provision of adequate funding to promote the contribution of industry to global sustainable development, as well as upon UNDP making full use of the experience and expertise available within the Organization.

B. New financial instruments and resources

56. At UNCED, it was recognized that substantial new and additional resources would have to be made available for sustainable development and implementation of Agenda 21. It was encouraging to note that "developed countries reaffirmed their commitments to reach the accepted United Nations target of 0.7 per cent of the gross national product for official development assistance (ODA) and, to the extent that they have not yet achieved that target, agree to augment their aid programmes in order to reach that target as soon as possible and to ensure a prompt and effective implementation of Agenda 21" (chap. 33, para. 33.15).

57. UNIDO is increasing its access to multilateral sources of financing for sustainable development, in particular those listed in the financial mechanisms of Agenda 21. It is currently working with the Interim Multilateral Fund to become the fourth executing agency of the Montreal Protocol on Substances that Deplete the Ozone Layer. UNIDO is also attempting to develop programmes consistent with the criteria and priorities of the Global Environment Facility (GEF), a $1.5 billion experimental facility set up for an initial period of three years. The Facility is managed by the World Bank, UNDP and UNEP and provides grants for investment projects, technical cooperation and research to assist developing countries in the transfer of environmentally benign technologies. UNIDO is also an observer at the Committee of International Development Institutions on the Environment (CIDIE), a forum chaired by UNEP with the aim of ensuring coordination among multilateral development assistance agencies in the area of environment.

58. Notwithstanding the above, it must be noted that close cooperation between the United Nations agencies and financial institutions is largely absent today. This is evidenced by, inter alia, the record to date of GEF, whose operational procedures are being revised following the outcome of UNCED. Specialized agencies have extensive experience in their respective fields, and many have solid and long-standing environmental programmes as well. They should be given first call on resources allocated to Agenda 21, particularly those originating with or managed by financial institutions or funding mechanisms of the United Nations system.

C. Follow-up at the international institutional level

59. UNIDO is fully committed to promoting close cooperation within the United Nations' inter-agency coordination mechanisms in order to play an active role in identifying and developing programming opportunities for specific areas of Agenda 21 relevant to its mandate.

60. However, despite the prominent role that UNIDO can and should play in the implementation of Agenda 21, the Organization was not invited to become a member of the ad hoc Administrative Committee on Coordination (ACC) Task Force on Environment and Development that was established by the Secretary-General of the United Nations to offer guidance on post-UNCED institutional arrangements. However, it is hoped that the Organization is enabled to play its due role in the policy deliberations of system-wide coordination. UNIDO has already conveyed a comprehensive note to the Task Force in which the Organization described its potential role in the implementation of Agenda 21, outlining its experience to date and likely contribution to specific chapters of Agenda 21.

61. Agenda 21 also envisages a commission on sustainable development being established within the Economic and Social Council in order "to provide for the active involvement of organs, programmes and organizations of the United Nations system ... and encourage the participation of non-governmental organizations, including industry and the business and scientific communities" (chap. 38, para. 11). Specific organizational modalities for the work of the proposed commission, such as its membership and its relationship with other intergovernmental bodies dealing with matters related to environment and development, will be determined by the General Assembly at its forty-seventh session. UNIDO will endeavour to participate actively in the proposed commission in order to be fully and actively involved in the system-wide coordination and monitoring of the implementation of Agenda 21.

V. ACTION REQUIRED OF THE BOARD

62. The Board may wish to take note of the present document and provide further guidance.